

## T822C,E Cooling Thermostats

### Application

T822C,E Thermostats provide low voltage control of cooling systems. Both models have fixed cooling anticipators and are available with a positive OFF switch and temperature range stops. The T822E has ON-AUTO fan switching and OFF-AUTO system switching.



### Recycling Notice

This control contains mercury in a sealed tube. Do not place control in the trash at the end of its useful life.

If this control is replacing a control that contains mercury in a sealed tube, do *not* place your old control in the trash.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of this control, or of an old control containing mercury in a sealed tube.

If you have questions, call Honeywell at 1-800-468-1502.

### Installation

#### WHEN INSTALLING THIS PRODUCT...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the Instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these Instructions.



### CAUTION

Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.

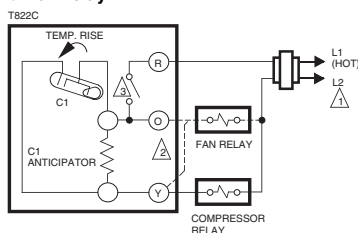
#### LOCATION

Locate the thermostat about 5 ft [1.5 m] above the floor on an inside wall in an area with good air circulation at average temperature.

Do not mount the thermostat where it can be affected by:

- drafts or dead spots behind doors or in corners.
- hot or cold air from ducts.
- radiant heat from the sun, fireplaces, or appliances.
- concealed pipes and chimneys.
- unheated (uncooled) areas behind the thermostat such as an outside wall.

Fig. 1—T822C in typical cooling application with fan relay.



- A POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- A CONNECT FAN TO O FOR CONTINUOUS FAN OPERATION. CONNECT FAN TO Y FOR FAN OPERATION WITH COOLING EQUIPMENT CYCLING.
- A POSITIVE OFF SWITCH PROVIDES COMPLETE CONTROL CIRCUIT SHUTOFF. DOES NOT REPLACE POWER SUPPLY DISCONNECT SWITCH.

M1282A

### MOUNTING AND WIRING

Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.

All wiring must comply with local codes and ordinances. T822C,E Thermostats are designed to be vertically mounted on a wall or an outlet box.

1. In replacement applications, check the existing thermostat wires for cracked or frayed insulation. Replace any wires in poor condition. If the wire is plastered into the wall, make a hole next to the wires and loosen the wires so that they can be pushed back into the wall later.

2. In new installations, run wiring (if necessary) to the thermostat location.

3. Connect the wires to the terminals on the back of the thermostat. See Figs. 1, 2, or 3 for internal schematics and typical hookup diagrams.

4. Remove thermostat cover by pulling outward on bottom edge of cover until it snaps free of the thermostat base. Carefully remove and discard the foam plastic shipping insert. This insert protects the switch and bimetal assembly during shipping.

5. Push excess wire back through the hole and plug any opening with insulation to prevent drafts that may affect thermostat performance.

6. Loosely fasten the thermostat to the wall or outlet box with a screw through the top mounting hole. Do not tighten.

7. Level the thermostat exactly using a spirit level or plumb line. Tighten the mounting screws.

**IMPORTANT:** An incorrectly leveled thermostat will cause the temperature control to deviate from setpoint.

8. Replace the thermostat cover.

Fig. 2—T822C in typical cooling application.

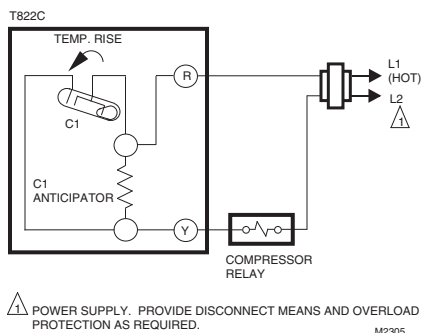
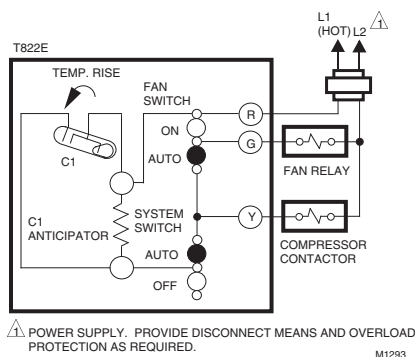


Fig. 3—T822E in typical cooling application.



## Settings and Adjustment

### TEMPERATURE SETTING

Move the temperature setting lever to the desired control point on the temperature scale. On positive OFF models, the control circuit is broken when the lever is moved to the extreme high end of the temperature scale.

### T822E FAN AND SYSTEM SWITCHING

The fan switch controls fan operation as follows:

AUTO— fan operates in response to the thermostat call for cooling.

ON— fan operated continuously.

The system switch controls system operations as follows:

OFF—cooling control system is disabled.

AUTO—cooling control system operates in response to the thermostat call for cooling.

### RECALIBRATION

These thermostats are calibrated at the factory and should not need recalibration. If the thermostat seems out of adjustment, first check for accurate leveling. To check calibration, proceed as follows:

1. Move the temperature setting lever to the low end of the temperature scale.
2. Remove the thermostat cover. Move the setting lever until the switch just makes contact. The mercury in

the switch will drop to the contact end of the tube.

3. Replace cover and wait five minutes for the cover and the thermostat to lose the heat it has gained from your hands. If the thermostat pointer and the setting lever indicator read approximately the same, no recalibration is needed.

If recalibration appears necessary, proceed as follows:

1. Place the temperature setting lever at the same setting as the thermometer. Remove cover.
2. Insert 104994A Calibration Wrench (order separately) onto the hex nut under the coil. See Fig. 4. Holding the setting lever so it does not move, turn the wrench clockwise until the switch just breaks contact. Remove wrench and replace cover.
3. Move the setting lever to a low setting. Wait at least five minutes for temperature to stabilize.
4. Slowly move the setting lever until it reads the same as the thermometer.
5. Remove cover. Holding the setting lever so it does not move, reinsert wrench and carefully turn counter-clockwise until the mercury just rolls to the left end of the tube but *no farther*.
6. Recheck calibration. Set thermostat system switch for desired operation and replace cover.

## Checkout



### CAUTION

Do not check thermostat operation by shorting across system control terminals. This damages the thermostat heat anticipator.

#### T822C,E COOLING THERMOSTATS



### CAUTION

Do not operate cooling circuit if outdoor temperature is 50° F [10° C] below room temperature. Refer to air conditioner manufacturer recommendations.

**NOTE:** To prevent compressor short cycling, a minimum off-timer may be included to provide a five minute time delay before reactivating the compressor or after compressor receives power.

1. Set T822E SYSTEM switch to AUTO and FAN switch to AUTO. Fan and system operation are now controlled by the thermostat.

2. Move temperature setting lever about 10° F [6° C] below room temperature. Cooling and fan start immediately.

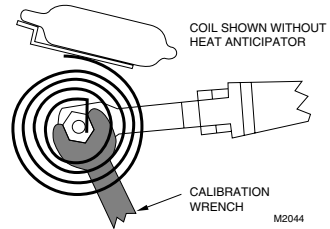
3. Move temperature setting lever about 10° F [6° C] above room temperature. Cooling and fan stop immediately.

4. Set T822E SYSTEM switch to AUTO and FAN switch to ON. Fan runs continuously.

5. Set T822E SYSTEM switch to OFF. Cooling control system is disabled.

6. Set temperature lever and T822E SYSTEM and FAN switches to the desired settings.

**Fig. 4—Recalibration procedure.**



**Honeywell**

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